

Part 1

Base Information

1. Project Title

SH 83 (Parker Road) PEL Study (Mississippi – Hampden)

2. Project *Start/End* points or Geographic Area

Provide a map with submittal, as appropriate

SH 83 (Parker Road) from Mississippi Avenue to Hampden Avenue

3. Project Sponsor (*entity that will construct/ complete and be financially responsible for the project*)

Arapahoe County

4. Project Contact Person, Title, Phone Number, and Email

Bryan Weimer, Director, Public Works and Development, 720-874-6500, BWeimer@arapahoegov.com

5. Does this project touch CDOT Right-of-Way, involve a CDOT roadway, access RTD property, or request RTD involvement to operate service?

☒ Yes ☐ No

If yes, provide applicable concurrence documentation with submittal

6. What planning document(s) identifies this project?

☐ [DRCOG 2040 Fiscally Constrained Regional Transportation Plan \(2040 FC RTP\)](#)

☐ Local plan:

☐ Other(s):

Provide link to document/s and referenced page number if possible, or provide documentation with submittal

7. Identify the project's **key elements**.

- ☐ Rapid Transit Capacity (2040 FC RTP)
- ☐ Transit Other:
- ☐ Bicycle Facility
- ☐ Pedestrian Facility
- ☐ Safety Improvements
- ☐ Roadway Capacity or Managed Lanes (2040 FC RTP)
- ☐ Roadway Operational

Grade Separation

- ☐ Roadway
- ☐ Railway
- ☐ Bicycle
- ☐ Pedestrian
- ☐ Roadway Pavement Reconstruction/Rehab
- ☐ Bridge Replace/Reconstruct/Rehab
- ☒ Study
- ☐ Design
- ☐ Transportation Technology Components
- ☐ Other:

8. Problem Statement What specific Metro Vision-related subregional problem/issue will the transportation project address?

SH 83 (Parker Road) is a major north-south corridor that provides regional connectivity and functions as a parallel alternative to I-25 for the large neighborhoods and employment centers of the southeast Denver Metropolitan area. It crosses through key economic activity centers and residential areas for many local jurisdictions, including Denver, Aurora, Centennial, Foxfield, Parker, and unincorporated Arapahoe and Douglas Counties. The state highway is an important regional connection to I-225 and the Nine Mile LRT Station. Additionally, Parker Road connects the DRCOG region to the south as a continuous state highway between Denver and Colorado Springs.

To date, no substantive cumulative study for a vision and improvements has been performed for the Mississippi Avenue to I-225 section of the SH 83 highway. To the north, the *Speer/Leetsdale Mobility Study* completed by the City and County of Denver ended at Mississippi Avenue. That study recommended Bus Rapid Transit (BRT) and a logical terminus for such a facility is the Nine Mile LRT Station at the I-225/Parker Road interchange. To the south, a PEL study was completed by Arapahoe County in 2009 for Parker Road from I-225 to E-470.

Traffic volumes along the SH 83 (Parker Road) study corridor vary with higher volumes approaching the I-225 interchange from the north and south, with connections to the Nine Mile LRT Station and the growing employment and medical centers along the freeway.

Issues along the study corridor include:

- Bottlenecks at congested intersections with relatively high volumes on the cross street, especially at Iliff Avenue and Havana Street
- Severe congestion between Peoria Street Hampden Avenue, and at the I-225 interchange
- Significant weaving movements affecting capacity south of the I-225 interchange
- Access control challenges north of I-225 with a balance needed to maintain adequate business access
- Pedestrian and bicyclist connectivity along and across the corridor
- Congestion and operational issues at the Nine Mile LRT Station
- Congestion-related crashes during peak commuting hours
- Multimodal connectivity to the Nine Mile LRT Station
- Improved mobility and access to area businesses and neighborhoods
- Balancing improved travel time for regional trips through the corridor with local access

The SH 83 (Parker Road) PEL Study (Mississippi – Hampden) project will address the following Metro Vision TIP Focus Areas (detailed in Part 2C of this application):

- Improving mobility infrastructure and services for vulnerable populations – by identifying existing and future issues along the corridor and evaluating alternatives to improve mobility and safety for corridor users;
- Increasing the reliability of the existing multimodal transportation network – with recommendations for reduced congestion and improved intersection efficiencies, as well as improved accessibility for pedestrians/bicyclists to the Nine Mile LRT Station; and
- Improving transportation safety and security – by reducing congestion-related vehicular crashes and addressing safety challenges for pedestrians and bicyclists traveling along and across the SH 83 corridor.

9. Define the *scope* and *specific elements* of the project.

The project will be a Planning and Environmental Linkages (PEL) Study, consistent with the CDOT and FHWA approach for corridor planning. The study will identify the improvements necessary along the corridor to address existing and proposed multimodal operations, safety, mobility, congestion, accessibility (vehicular and transit), right-of-way preservation, and pedestrian/bicyclist connectivity, as well as how to accommodate future travel demands, transit ridership, and pedestrian/bicyclist demands that will occur as redevelopment continues within the corridor.

The PEL study will complete an evaluation of a missing piece of SH 83 (Parker Road) between two studies (the Speer/Leetsdale Study to the north and the Parker Road PEL Study to the south). The study will evaluate existing conditions and issues comprehensively and develop alternatives to address the issues identified. The study will be the first step in establishing a vision for improvements and changes along the SH 83 corridor. The improvement recommendations will be prioritized for further evaluation, design, and implementation, as well as consideration for various regional plans.

The project will include the following scope:

- Agency Coordination with Project Team, Technical Committee, and Policy Committee
- Public and Stakeholder Involvement
- Existing Conditions Evaluation
- Environmental Overview
- Purpose and Need and Goals for the Corridor
- Alternatives Development and Evaluation
- Conceptual Design and Cost Estimates
- Recommendations with Prioritization/Phasing
- PEL Report Documentation

10. What is the status of the proposed project?

Arapahoe County is currently completing final design of intersection improvements at Parker Road/Iliiff Avenue with previous TIP funding. The City and County of Denver completed the *Speer/Leetsdale Mobility Study* in 2017 north of the proposed study corridor. Arapahoe County completed the *Parker Road PEL Study* in 2009 south of the proposed study corridor. To date, no substantive study for a vision and improvements has been performed for this section of the SH 83 highway.

11. Would a smaller DRCOG-allocated funding amount than requested be acceptable, while maintaining the original intent of the project?

☒ Yes ☐ No

If yes, define smaller meaningful limits, size, service level, phases, or scopes, along with the cost for each.

It is our understanding that reducing the amount of federal funding is considered at the end of the evaluation and recommendation process. However, if this were to occur there are several options that the funding partners would consider to move the project forward in some fashion. This could include reallocation of partnership funding for the various partners. Also, as a PEL study, there is flexibility to adjust the scope of work to fit within available budget, while maintaining the original intent of the project to identify corridor issues and define an overall corridor vision.

A. Project Financial Information and Funding Request

1. Total Project Cost		\$2,000,000
2. Total amount of DRCOG Subregional Share Funding Request	\$1,000,000	50% of total project cost
3. Outside Funding Partners (other than DRCOG Subregional Share funds) List each funding partner and contribution amount.	\$\$ Contribution Amount	% of Contribution to Overall Total Project Cost
CDOT	\$500,000	25%
Arapahoe County	\$166,668	8.4%
City of Aurora	\$166,666	8.3%
City and County of Denver	\$166,666	8.3%
	\$	
	\$	
Total amount of funding provided by other funding partners (private, local, state, Regional, or federal)	\$1,000,000	

Funding Breakdown (year by year)*		<i>*The proposed funding plan is not guaranteed if the project is selected for funding. While DRCOG will do everything it can to accommodate the applicants' request, final funding will be assigned at DRCOG's discretion within fiscal constraint. Funding amounts must be provided in year of expenditure dollars using an inflation factor of 3% per year from 2019.</i>			
	FY 2020	FY 2021	FY 2022	FY 2023	Total
Federal Funds	\$	\$	\$1,000,000	\$	\$1,000,000
State Funds	\$	\$	\$500,000	\$	\$500,000
Local Funds	\$	\$	\$500,000	\$	\$500,000
Total Funding	\$0	\$0	\$1,000,000	\$0	\$2,000,000
4. Phase to be Initiated Choose from Design, ENV, ROW, CON, Study, Service, Equip. Purchase, Other			Study	Choose an item	

- 5. By checking this box**, the applicant's Chief Elected Official (Mayor or County Commission Chair) or City/County Manager for local governments or Agency Director or equivalent for others, has certified it allows this project request to be submitted for DRCOG-allocated funding and will follow all DRCOG policies and state and federal regulations when completing this project, if funded.



Part 2 Evaluation Criteria, Questions, and Scoring

A. Subregional significance of proposed project

WEIGHT

40%

Provide **qualitative and quantitative** (derived from Part 3 of the application) responses to the following questions on the subregional significance of the proposed project.

1. Why is this project important to your subregion?

SH 83 (Parker Road) is a major north-south corridor that provides regional connectivity and functions as a parallel alternative to I-25 for the large neighborhoods and employment centers of the southeast Denver Metropolitan area. It has continuity running from Castle Rock to the Denver Central Business District. It crosses through key economic activity centers and residential areas for many local jurisdictions, including Denver, Aurora, Centennial, Foxfield, Parker, and unincorporated Arapahoe and Douglas Counties. The state highway is an important regional connection to I-225 and the Nine Mile LRT Station.

There are diverse land uses that are served by the corridor ranging from residential to commercial to industrial, leading to diverse multimodal users along the corridor. The 2020 population and employment within one mile of the study corridor is approximately 155,000 people, which is projected to increase by about 17% to over 180,000 people in 2040.

Safe and effective travel along the regional SH 83 highway supports economic growth for the surrounding business community and quality of life for area residents. SH 83 (Parker Road) in the project area is shown in the DRCOG 2040 Fiscally Constrained Regional Transportation Plan as a Congested Corridor (Mobility Grade of D or F) by 2040. Traffic on SH 83 north of the I-225 interchange is expected to increase significantly, with an almost 20% increase to 65,000 vehicles per day by 2040 north of the interchange and an over 28% increase to 118,000 vehicles per day south of the interchange. Peak hour traffic operations are congested along SH 83 (Parker Road), particularly during the commuting peak periods, with low average travel speeds, poor levels of service, and long vehicle queues approaching the signalized intersections.

2. Does the proposed project cross and/or benefit multiple **municipalities? If yes, which ones and how?**

Yes, the study recommendations will reduce delay and improve mobility for the estimated 45,000 – 125,000 travelers along the SH 83 (Parker Road) corridor in the project area, to and from Arapahoe County, City of Aurora, City and County of Denver, and beyond.

Reducing congestion and improving multimodal operations along SH 83 (Parker Road) between Central Denver and I-225 will support economic growth for the surrounding municipalities, including Arapahoe County, City of Aurora, and City and County of Denver, and improve the quality of life for area residents.

3. Does the proposed project cross and/or benefit another **subregion(s)? If yes, which ones and how?**

Yes, the study recommendations will improve the connection for commuters living in the southeast metropolitan area destined for the Parker/Leetsdale corridor, Cherry Creek/Colorado Boulevard area, downtown Denver, and the employment/retail/medical centers along the I-225 corridor and southern metropolitan area, improving access between the City and County of Denver, Arapahoe County, and Douglas County subregions.

Benefits from the recommended improvements include reduced congestion, improved accessibility to alternative travel modes, including the Nine Mile LRT Station, improved trip reliability for corridor users and emergency service providers, improved operational efficiencies, and improved safety.

4. How will the proposed project address the specific transportation problem described in the **Problem Statement** (as submitted in Part 1, #8)?

The PEL study will identify ways to address congestion, operations, and multimodal mobility for the SH 83 (Parker Road) corridor. This will be accomplished through the identification of corridor area issues, evaluation and recommendation of improvements, and prioritization of projects for future planning and implementation. Travel Demand Management strategies, technology, and other congestion mitigation strategies will also be considered by the study.

The PEL study will provide an overall vision and roadmap for corridor improvements to be pursued for implementation with strategies to accomplish the recommendations, possibly for inclusion in the fiscally-constrained 2050 Regional Transportation Plan.

5. One foundation of a sustainable and resilient economy is physical infrastructure and transportation. How will the **completed** project allow people and businesses to thrive and prosper?

The PEL study will consider improvements that will encourage additional patronage to nearby businesses by reducing the frequent congestion along the SH 83 (Parker Road) corridor. The recommended operational improvements at corridor intersections will improve the liveability, attractiveness, and perceived safety of the neighborhoods adjacent to the corridor. Improving accessibility and mobility along SH 83 will improve the quality of life for the approximately 45,000 – 125,000 travelers utilizing the study corridor every day.

Within one mile of the study corridor, there are over 4,000 households without access to a vehicle, which presents an opportunity for increase transit ridership if transit and connections to multimodal facilities are improved.

Improving the direct access to the Nine Mile LRT Station for drivers, pedestrians, and bicyclists will also encourage more regional transit travel. Study recommendations will save people auto fuel and maintenance costs, reduce air pollution, and create positive health impacts by encouraging people to use alternative transportation.

The PEL study will also focus on reducing crashes along the SH 83 (Parker Road) corridor.

6. How will connectivity to different travel modes be improved by the proposed project?

The study will review the issue of SH 83 (Parker Road) acting as a barrier to east-west pedestrian/bicyclist movements between area land uses. Vehicular and pedestrian/bicycle access to the Nine Mile LRT Station and other transit facilities within the area will be evaluated for enhancement and opportunities to increase transit ridership. The demand for pedestrian/bicyclist travel along the corridor will also be considered, such as multi-use path facilities along the highway or off the corridor.

The improved transit accessibility will also enhance the overall multimodal connections beyond the Nine Mile LRT Station, encouraging more people to utilize transit for commuting and other daily trips.

7. Describe funding and/or project partnerships (other subregions, regional agencies, municipalities, private, etc.) established in association with this project.

CDOT has provided a concurrence and funding support letter for this project. In addition, the three jurisdictions along the SH 83 (Parker Road) study corridor (Arapahoe County, City of Aurora, and City and County of Denver) are supportive of the study and are providing funding as listed. This is a multi-jurisdictional supported project with a common goal of providing solutions to the existing and future projected corridor issues.

Arapahoe County is committed to working with regional agencies to complete this PEL study to identify corridor improvements that will be mutually beneficial to the entire region.

B. DRCOG Board-approved Metro Vision TIP Focus Areas

WEIGHT

25%

Provide **qualitative and quantitative** (derived from Part 3 of the application) responses to the following questions on how the proposed project addresses the three DRCOG Board-approved Focus Areas (in bold).

1. Describe how the project will **improve mobility infrastructure and services for vulnerable populations (including improved transportation access to health services)**.

Large populations of vulnerable individuals reside within one mile of the SH 83 (Parker Road) proposed study corridor. Currently living within one mile of the project area are:

- 17,112 adults over the age of 65
- 43,053 minority persons
- 5,799 households living in poverty
- 4,528 linguistically-challenged persons
- 5,302 persons with a disability
- 4,266 households without access to a vehicle

Identifying existing and future issues along the corridor and evaluating alternatives to reduce congestion, improve operations, and provide improved accessibility to transit and pedestrian/bicyclist facilities will provide additional travel opportunities for these targeted groups.

The study will also evaluate alternatives that would improve access to the over 250 CDPHE-regulated health service facilities within one mile of the project area. Improved vehicular and multimodal access to these facilities, plus improved corridor operations for emergency responders, will provide community health benefits beyond the immediate transportation elements.

2. Describe how the project will **increase reliability of existing multimodal transportation network**.

The corridor serves a population of over 106,000 people within one mile of the study corridor and this population is expected to grow by 10% to more than 117,000 by 2040. Within one mile of the study corridor there are more than 48,000 employees with a projected increase of more than 32% to over 64,000 employees by 2040.

The corridor serves the people living and working in the area by providing opportunities to drive, walk, bike, or ride transit to access their residence or employment. This study will evaluate and recommend enhancements to the existing multimodal transportation network to reduce congestion and improve intersection efficiencies, as well as improve accessibility for pedestrians/bicyclists to the Nine Mile LRT Station.

The recommended improvements from the study will focus on providing improved travel reliability and operations for all forms of travel within and to/from the corridor. For example, reducing congestion along the SH 83 (Parker Road) corridor will improve the travel time reliability for transit routes by providing better on-time performance. Improved pedestrian and bicyclist connections along and across the corridor will also encourage people across all ages, abilities, and socioeconomic status to access affordable and reliable transportation options.

3. Describe how the project will **improve transportation safety and security**.

The PEL study will analyze crash data along the SH 83 (Parker Road) corridor to identify trends and likely issues. Recommendations will focus on targeted improvements to address specific crash trends. The alternatives evaluation completed with the study will consider safety improvements to reduce vehicular crashes and address safety challenges for pedestrians and bicyclists traveling along and across the SH 83 corridor.

C. Consistency & Contributions to Transportation-focused Metro Vision Objectives

WEIGHT

15%

Provide **qualitative and quantitative** responses (derived from Part 3 of the application) to the following items on how the proposed project contributes to Transportation-focused Objectives (in bold) in the adopted Metro Vision plan. Refer to the expanded Metro Vision Objective by clicking on links.

[MV objective 2](#)

Contain urban development in locations designated for urban growth and services.

1. Will this project help focus and facilitate future growth in locations where urban-level infrastructure already exists or areas where plans for infrastructure and service expansion are in place?

☒ Yes ☐ No

Describe, including supporting quantitative analysis

The PEL study corridor along SH 83 (Parker Road) travels through the I-225/Parker Road and Iliff Avenue Center urban centers. The project will also provide improved access to the urban centers of Glendale City Center and Cherry Creek, north of the project area.

With reduced congestion, the project will improve regional travel connections to the urban centers to focus and facilitate planned growth in identified areas along SH 83.

[MV objective 3](#)

Increase housing and employment in urban centers.

2. Will this project help establish a network of clear and direct multimodal connections within and between urban centers, or other key destinations?

☒ Yes ☐ No

Describe, including supporting quantitative analysis

The study recommendations will improve transit, pedestrian, and bicyclist connections to the Nine Mile LRT Station. The improved transit accessibility will also enhance the overall multimodal connections beyond the Nine Mile LRT Station, encouraging more people to utilize transit to connect to key destinations throughout the Denver Metropolitan area.

Reduced congestion along SH 83 (Parker Road) will also improve travel time reliability for transit services. The improved LRT Station access will enhance the connections between the emerging and existing urban centers along the SH 83 corridor and beyond.

[MV objective 4](#)

Improve or expand the region's multimodal transportation system, services, and connections.

3. Will this project help increase mobility choices within and beyond your subregion for people, goods, or services?

☒ Yes ☐ No

Describe, including supporting quantitative analysis

Safe and effective access between Central Denver, I-225, and the Nine Mile LRT Station supports economic growth for the surrounding business community and quality of life for area residents. The goal of the PEL study is to develop alternatives and recommendations that enhance the corridor for all transportation modes. For example, reduced congestion along SH 83 (Parker Road) will improve travel time reliability for transit services, in addition to general vehicular access to the Nine Mile LRT Station, benefitting the vulnerable populations relying on transit access within the project area.

MV objective 6a	Improve air quality and reduce greenhouse gas emissions.	
<p>4. Will this project help reduce ground-level ozone, greenhouse gas emissions, carbon monoxide, particulate matter, or other air pollutants?</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p><i>Describe, including supporting quantitative analysis</i></p> <p>Although the PEL study itself will not reduce greenhouse gases, it is expected to recommend improvements that, once implemented, will reduce greenhouse gas emissions and improve air quality. For example, reducing congestion and queuing along SH 83 (Parker Road) and at the I-225/Parker Road interchange will incrementally help improve all aspects of air quality. Improving multimodal facilities and providing new connections within the project area will make the use of sidewalks/trails/paths and Nine Mile LRT Station more attractive as alternative modes of transportation. Encouraging mode changes will reduce the vehicular volumes, which will also improve air quality.</p>		
MV objective 7b	Connect people to natural resource or recreational areas.	
<p>5. Will this project help complete missing links in the regional trail and greenways network or improve other multimodal connections that increase accessibility to our region's open space assets?</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p><i>Describe, including supporting quantitative analysis</i></p> <p>There are numerous recreational opportunities in the vicinity of the SH 83 (Parker Road) corridor, including regional parks (Cherry Creek State Park, John F. Kennedy Park, Hentzell Park, and Babi Yar Park) and regional trails (High Line Canal Trail, Cherry Creek Regional Trail, and Cherry Creek Spillway Trail).</p> <p>Accessibility and mobility to/from these areas and facilities would be enhanced with multimodal transportation improvements throughout the corridor.</p>		
MV objective 10	Increase access to amenities that support healthy, active choices.	
<p>6. Will this project expand opportunities for residents to lead healthy and active lifestyles?</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p><i>Describe, including supporting quantitative analysis</i></p> <p>By recommending safe and efficient pedestrian/bicyclist alternatives along and across the SH 83 (Parker Road) corridor, the study will increase access to various amenities along the corridor area. Also, pedestrian/bicyclist connections to adjacent facilities will create an alternative transportation opportunity to recreate, travel to work, or connect to other amenities.</p>		
MV objective 13	Improve access to opportunity.	
<p>7. Will this project help reduce critical health, education, income, and opportunity disparities by promoting reliable transportation connections to key destinations and other amenities?</p>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<p><i>Describe, including supporting quantitative analysis</i></p> <p>The demographics within one mile of the corridor provide an opportunity to significantly enhance access and mobility for these various populations. Providing improved opportunities for people to walk, bike, or take transit will help address mobility barriers by enhancing the affordable and accessible transportation options for the over 4,200 households within a mile of the study corridor that do not own a car and/or are unable to drive.</p> <p>The study will also provide recommendations to improve accessibility for people living in the surrounding area to medical facilities and employment centers by improving the connection between the residential areas and activity centers with the over 250 health care facilities within one mile of the study corridor.</p>		

MV objective 14		Improve the region's competitive position.	
8. Will this project help support and contribute to the growth of the subregion's economic health and vitality?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Describe, including supporting quantitative analysis			
The PEL study recommendations will address congestion and safety issues along the SH 83 (Parker Road) corridor, which will enhance the economic health and vitality of the area surrounding the corridor. Area residents and employees will have improved accessibility to the neighborhoods and employment centers and increased opportunities for multimodal travel.			
D. Project Leveraging		WEIGHT 20%	
9. What percent of outside funding sources (non-DRCOG-allocated Subregional Share funding) does this project have?	50%	41%+ outside funding sourcesHigh 31-40%Medium 30% and below Low	

Part 3

Project Data Worksheet – Calculations and Estimates

(Complete all subsections applicable to the project)

A. Transit Use

1. Current ridership weekday boardings	-
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	106,254	48,418	154,672
2040	117,303	64,129	181,432

Transit Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional daily transit boardings after project is completed. (Using 50% growth above year of opening for 2040 value, unless justified) <i>Provide supporting documentation as part of application submittal</i>	0	0
4. Enter number of the additional transit boardings (from #3 above) that were previously using a different transit route. (Example: {#3 X 25%} or other percent, if justified)	0	0
5. Enter number of the new transit boardings (from #3 above) that were previously using other non-SOV modes (walk, bicycle, HOV, etc.) (Example: {#3 X 25%} or other percent, if justified)	0	0
6. = Number of SOV one-way trips reduced per day (#3 – #4 – #5)	0	0
7. Enter the value of {#6 x 9 miles}. (= the VMT reduced per day) (Values other than the default 9 miles must be justified by sponsor; e.g., 15 miles for regional service or 6 miles for local service)	0	0
8. = Number of pounds GHG emissions reduced (#7 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:		
10. If different values other than the suggested are used, please explain here:		

B. Bicycle Use

1. Current weekday bicyclists	-
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	106,254	48,418	154,672
2040	117,303	64,129	181,432

Bicycle Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday one-way bicycle trips on the facility after project is completed.	0	0
4. Enter number of the bicycle trips (in #3 above) that will be diverting from a different bicycling route. (Example: {#3 X 50%} or other percent, if justified)	0	0
5. = Initial number of new bicycle trips from project (#3 – #4)	0	0

6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: {#5 X 30%}) or other percent, if justified)	0	0
7. = Number of SOV trips reduced per day (#5 - #6)	0	0
8. Enter the value of {#7 x 2 miles} . (= the VMT reduced per day) (Values other than 2 miles must be justified by sponsor)	0	0
9. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	0	0
10. If values would be distinctly greater for weekends, describe the magnitude of difference:		
11. If different values other than the suggested are used, please explain here:		

C. Pedestrian Use

1. Current weekday pedestrians (include users of all non-pedaled devices)	-
2. Population and Employment	

Year	Population within 1 mile	Employment within 1 mile	Total Pop and Employ within 1 mile
2020	106,254	48,418	154,672
2040	117,303	64,129	181,432

Pedestrian Use Calculations	Year of Opening	2040 Weekday Estimate
3. Enter estimated additional weekday pedestrian one-way trips on the facility after project is completed	0	0
4. Enter number of the new pedestrian trips (in #3 above) that will be diverting from a different walking route (Example: {#3 X 50%}) or other percent, if justified)	0	0
5. = Number of new trips from project (#3 – #4)	0	0
6. Enter number of the new trips produced (from #5 above) that are replacing an SOV trip. (Example: {#5 X 30%}) or other percent, if justified)	0	0
7. = Number of SOV trips reduced per day (#5 - #6)	0	0
12. Enter the value of {#7 x .4 miles} . (= the VMT reduced per day) (Values other than .4 miles must be justified by sponsor)	0	0
8. = Number of pounds GHG emissions reduced (#8 x 0.95 lbs.)	0	0
9. If values would be distinctly greater for weekends, describe the magnitude of difference:		
10. If different values other than the suggested are used, please explain here:		

D. Vulnerable Populations

	Vulnerable Populations	Population within 1 mile
Use Current Census Data	1. Persons over age 65	17,112
	2. Minority persons	43,053
	3. Low-Income households	5,799
	4. Linguistically-challenged persons	4,528
	5. Individuals with disabilities	5,302
	6. Households without a motor vehicle	4,266
	7. Children ages 6-17	12,373
	8. Health service facilities served by project	254

E. Travel Delay *(Operational and Congestion Reduction)*

Sponsor must use industry standard Highway Capacity Manual (HCM) based software programs and procedures as a basis to calculate estimated weekday travel delay benefits. *DRCOG staff may be able to use the Regional Travel Model to develop estimates for certain types of large-scale projects.*

1. Current ADT (average daily traffic volume) on applicable segments	SH 83 south of Mississippi = 32,000 vpd SH 83 south of Iliff = 40,000 vpd SH 83 north of Peoria = 54,000 vpd SH 83 north of Hampden = 92,000 vpd
2. 2040 ADT estimate	SH 83 south of Mississippi = 35,000 vpd SH 83 south of Iliff = 48,000 vpd SH 83 north of Peoria = 65,000 vpd SH 83 north of Hampden = 118,000 vpd
3. Current weekday vehicle hours of delay (VHD) (before project)	-

Travel Delay Calculations	Year of Opening
4. Enter calculated future weekday VHD (after project)	-
5. Enter value of {#3 - #4} = Reduced VHD	0
6. Enter value of {#5 X 1.4} = Reduced person hours of delay <i>(Value higher than 1.4 due to high transit ridership must be justified by sponsor)</i>	0
7. After project peak hour congested average travel time reduction per vehicle (includes persons, transit passengers, freight, and service equipment carried by vehicles). <i>If applicable, denote unique travel time reduction for certain types of vehicles</i>	0
8. If values would be distinctly different for weekend days or special events, describe the magnitude of difference.	
9. If different values other than the suggested are used, please explain here:	

F. Traffic Crash Reduction

1. Provide the current number of crashes involving motor vehicles, bicyclists, and pedestrians <i>(most recent 5-year period of data)</i>		Sponsor must use industry accepted crash reduction factors (CRF) or accident modification factor (AMF) practices (e.g., NCHRP Project 17-25, NCHRP Report 617, or DiExSys methodology).
Fatal crashes	-	
Serious Injury crashes	-	
Other Injury crashes	-	
Property Damage Only crashes	-	
2. Estimated reduction in crashes <u>applicable to the project scope</u> <i>(per the five-year period used above)</i>		
Fatal crashes reduced	0	
Serious Injury crashes reduced	0	
Other Injury crashes reduced	0	
Property Damage Only crashes reduced	0	

G. Facility Condition

Sponsor must use a current industry-accepted pavement condition method or system and calculate the average condition across all sections of pavement being replaced or modified.
Applicants will rate as: Excellent, Good, Fair, or Poor

Roadway Pavement

1. Current roadway pavement condition	Choose an item
2. Describe current pavement issues and how the project will address them.	
3. Average Daily User Volume	SH 83 south of Mississippi = 32,000 vpd SH 83 south of Iliff = 40,000 vpd SH 83 north of Peoria = 54,000 vpd SH 83 north of Hampden = 92,000 vpd

Bicycle/Pedestrian/Other Facility

4. Current bicycle/pedestrian/other facility condition	N/A
5. Describe current condition issues and how the project will address them.	
6. Average Daily User Volume	-

H. Bridge Improvements

1. Current bridge structural condition from CDOT N/A	
2. Describe current condition issues and how the project will address them. N/A	
3. Other functional obsolescence issues to be addressed by project N/A	
4. Average Daily User Volume over bridge	N/A

I. Other Beneficial Variables *(identified and calculated by the sponsor)*

1.	
2.	
3.	

J. Disbenefits or Negative Impacts *(identified and calculated by the sponsor)*

1. Increase in VMT? <i>If yes, describe scale of expected increase</i>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
2. Negative impact on vulnerable populations	
3. Other:	

Part 4

Special Considerations

Complete all answers with a YES/NO/UNSURE, and an explanation as warranted. Part 4 is not scored but will assist in project recommendation.

1. Is the project a construction- or implementable- ready project?

Yes, this project is implementable-ready. The agency partners are ready to initiate the study as soon as funding is available.

2. Are there challenges with the project (right-of-way, environmental, utilities, etc.)?

a. If yes, explain the challenge and how agency plan to address.

No, there are no anticipated challenges with the study. The PEL study process has been previously implemented successfully by Arapahoe County with participation by the agency partners and stakeholders.

3. Are there other environmental or controversial issues associated with the project?

There are no anticipated controversial issues with the PEL study.

4. Does the project or program benefit more than just the sponsoring agency and considered subregionally significant/transformational?

Yes, the study recommendations will reduce delay and improve mobility for the estimated 45,000 – 125,000 travelers along the SH 83 (Parker Road) study corridor, to and from Arapahoe County, City of Aurora, City and County of Denver, and beyond.

SH 83 (Parker Road) is a major north-south corridor that provides regional connectivity and functions as a parallel alternative to I-25 for the large neighborhoods and employment centers of the southeast Denver Metropolitan area. It has continuity running from Castle Rock to the Denver Central Business District. It crosses through key economic activity centers and residential areas for many local jurisdictions, including Aurora, Centennial, Foxfield, Parker, and unincorporated Arapahoe and Douglas Counties. The state highway is an important regional connection to I-225 and the Nine Mile LRT Station.

There are diverse land uses that are served by the corridor ranging from residential to commercial to industrial, leading to diverse multimodal users along the corridor. The 2020 population and employment within one mile of the study corridor is approximately 155,000 people, which is projected to increase by about 17% to over 180,000 people in 2040. Reducing congestion and improving multimodal operations along SH 83 (Parker Road) between Central Denver and I-225 will support economic growth for the surrounding municipalities, including Arapahoe County, City of Aurora, and City and County of Denver, and improve the quality of life for area residents.

The study recommendations will improve the connection for commuters living in the southeast metropolitan area destined for the Parker/Leetsdale corridor, Cherry Creek/Colorado Boulevard area, downtown Denver, and the employment/retail/medical centers along the I-225 corridor and southern metropolitan area, improving access between the City and County of Denver, Arapahoe County, and Douglas County subregions. Benefits from the recommended improvements include reduced congestion, improved accessibility to alternative travel modes, including the Nine Mile LRT Station, improved trip reliability for corridor users and emergency service providers, improved operational efficiencies, and improved safety. Therefore, it is considered subregionally significant and transformational.

5. Does the agency have capacity and expertise to manage a federal project?

a. Explain experience, approach, etc.

Yes, Arapahoe County Transportation staff have broad experience managing projects with federal funding. The County is uniquely qualified to manage this PEL study, as the County managed the Parker Road PEL Study previously completed south of this proposed SH 83 (Parker Road) study corridor.

6. Is the project a next logical phase of a project funded in previous TIP cycles?

To date, no substantive cumulative study for a vision and improvements has been performed for this section of the SH 83 highway. To the north, the *Speer/Leetsdale Mobility Study* completed by the City and County of Denver ended at Mississippi Avenue. That study recommended Bus Rapid Transit (BRT) and a logical terminus for such a facility is the Nine Mile LRT Station at the I-225/Parker Road interchange. To the south, a PEL study was completed by Arapahoe County in 2009 for Parker Road from I-225 to E-470.

7. Of the partnerships described in Section A, Question 7, are the partnerships providing funding?

a. Describe the partnerships and funding of such.

CDOT has provided a concurrence and funding support letter for this project. In addition, the three jurisdictions along the SH 83 (Parker Road) study corridor (Arapahoe County, City of Aurora, and City and County of Denver) are supportive of the study and are providing funding as listed. This is a multi-jurisdictional supported project with a common goal of providing solutions to the existing and future projected corridor issues.

8. Are there any other “special considerations” the committee should consider in evaluating the application?

The SH 83 (Parker Road) study corridor is a major north-south corridor that provides regional connectivity for the southeast Denver Metropolitan area. A PEL study was completed for SH 83 south of the study corridor from I-225 to E-470, which recommended capacity improvements along the highway leading to the I-225 interchange. The *Speer/Leetsdale Mobility Study* north of the study area recommended Bus Rapid Transit (BRT) along the corridor. A logical terminus for BRT operations along Speer/Leetsdale is the Nine Mile LRT Station at the I-225/Parker Road interchange.

To date, no substantive cumulative study has been performed for the Mississippi Avenue to I-225 section of the SH 83 highway. Given the studies and improvements recommended north and south of this study corridor, it is imperative to identify issues and evaluate alternatives to develop an overall vision and path forward for the corridor that the PEL study process can provide.